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PATENT APPLICATION**IN THE UNITED STATES PATENT AND TRADEMARK OFFICE**

In re application of : Docket No.: OT-4465
Terry M. Robar et al. : Date: March 11, 2002
Appln. No.: 09/280,637 : Group Art: 2862 **FAX COPY RECEIVED**
Filing Date: March 29, 1999 : Examiner: W. Snow **MAR 11 2002**
TECHNOLOGY CENTER 2800

Title: **METHOD AND APPARATUS FOR MAGNETIC DETECTION
OF DEGRADATION OF JACKETED ELEVATOR ROPE (as Appended)**

Commissioner for Patents
Washington, DC 20231

I hereby certify that this paper is being facsimile transmitted
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Mary Focier March 11, 2002
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Sir:

RESPONSE

In response to the Office Action mailed December 11, 2001, Applicants request reconsideration of the above-identified application for the reasons set forth below.

Claims 1-33 are pending, of which claims 21-31 have been withdrawn. Claims 1, 4-6, 10 and 32 are independent.

Initially, Applicants gratefully acknowledge the Examiner's allowance of claims 5 and 32, as well as the indication that claims 18-20 would be allowable if rewritten in independent form. Applicants have not so rewritten claims 18-20 at this time because Applicants believe that independent claim 10, from which claims 18-20 depend, is allowable for the reasons set forth below.

In the Office Action, claims 1-4, 6-17 and 33 are rejected under 35 USC §102(b) as allegedly being anticipated by US Patent No. 5,570,017 (Blum). This rejection is respectfully traversed.

Independent claim 1 recites a method of detecting degradation of a rope comprising a body of non-ferromagnetic insulator material in which a plurality of longitudinally extended ferromagnetic cord members is distributed transversely. Independent claim 6 recites a method of detecting and locating degradation of a rope comprising a body of non-ferromagnetic insulator material in which a plurality of longitudinally extended ferromagnetic cord members is distributed transversely.

Each method includes, *inter alia*, identifying, based on the magnetic flux monitored at a position between two magnetic poles, locations along the cord members exhibiting magnetic flux leakage, wherein the locations are indicative of degradation.

Blum, on the other hand, discloses creating two magnetic loops that both run through a center yoke. The device in Blum detects changes in magnetic flux flowing through the center yoke due to increases in magnetic reluctance in one of the two magnetic loops. Blum does not disclose or suggest the feature, recited in each of claims 1 and 6, of identifying locations exhibiting magnetic flux leakage. In fact, Blum indicates that, when the damaged portion of the cables pass below the center yoke, the sensors will "detect substantially no magnetic field" since the two magnetic loops would be balanced.

Similarly, independent claim 4 recites a method of detecting and locating degradation of a rope comprising a body of non-ferromagnetic insulator material in which a plurality of longitudinally extended ferromagnetic cord members is distributed transversely. The method includes, *inter alia*, identifying, based on magnetic flux monitored at the position between two poles, points in time in which the cord members exhibit magnetic flux leakage, wherein the points in time are indicative of the location of rope degradation.

Blum does not disclose or suggest the feature, recited in claim 4, of identifying points in time in which the cords exhibit magnetic flux leakage.

Independent claim 10 recites an apparatus for detecting degradation of a rope comprising a rope body of non-ferromagnetic insulator material encasing at least one

longitudinally extended ferromagnetic component. The apparatus includes, *inter alia*, a detector body comprising rope guide means for guiding the rope along the detector body. Applicants do not understand Blum to disclose or suggest such a feature.

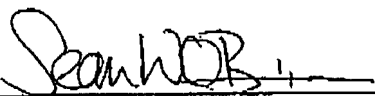
Therefore, Applicants submit that independent claims 1, 4, 6 and 10 patentably define the invention over the cited art.

The dependent claims, which are submitted to be allowable for the same reasons, also include features in addition to those recited in their respective base claims. For example, claim 2 recites that the magnetic circuit is created by relative movement between the rope and poles, whereas Blum discloses alternating magnetic loops created by a pair of field coils. Claims 7-9 recite measuring the magnitude of flux leakage, which as noted Blum does not disclose detecting at all. Claim 17 recites positioning flux sensors on opposing sides of the rope. Further independent consideration of the dependent claims is requested.

The application is submitted to be in condition for allowance. Favorable consideration and early passage to issue are requested.

Please charge any deficiency in fees associated with filing this response to our Deposit Account No. 15-0750, Order No. OT-4465.

Respectfully submitted,

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